

### REMARKS

Claims 12-31 are pending in the present application. Claims 1-11 were canceled; claims 12-31 were added. Reconsideration of the claims is respectfully requested.

Amendments were made to the specification to correct errors and to clarify the specification. No new matter has been added by any of the amendments to the specification.

#### I. Objections

The Examiner has objected to the specification and requested that the specification be amended to insert the correct serial numbers of the cross-referenced applications. Appropriate correction has been made. Applicants respectfully request that the objection to the specification be withdrawn.

#### II. 35 U.S.C. § 102, Anticipation

The Examiner has rejected claims 1-11 under 35 U.S.C. § 102(b) as being anticipated by *Carter* et al. (U.S. Patent No. 5,987,506). Applicants have cancelled claims 1-11 and added new claims 12-31. Applicants respectfully submit that Applicants' cancellation of the rejection claims and addition of new claims obviates the Examiner's rejection.

*Carter* is directed toward a distributed shared memory (DSM) system providing a global address space to a network of computers. *Carter* further teaches the creation of a file system within this global address space as a sort of distributed shared RAM disk. A hierarchical "directory" of memory pages within this global address space is depicted in Figure 10. There is no teaching or suggestion in *Carter*, however, of physical data blocks containing virtual address information that identifies at least one corresponding location in the virtual address space for each physical data block. *Carter* teaches only that the "directory" is stored in a series of pages in the global address space and individual nodes may locate the owning node and local address of a particular page by traversing the directory starting at a root directory page, the location of which is known to each node in the distributed address space. See col. 26, lines 42-44 ("The directory page 342 depicted in FIG. 10 acts like a root directory page and can be located at a static address that is

known to teach node coupled to the distributed address space.”); *see also* col. 26, line 66 – col. 27, line 6, below:

The depicted example of directory pages 360, 362, 364, and 366 are each leaf entries. The leaf entries contain directory entries such as the directory entries 356 and 358 of the leaf entry 360, that store a range field 330 and the responsible node field 332. These leaf entries identify an address and a responsible node for the page in the distributed memory space that is being accessed, such as the depicted pages 370-384.

*Carter* does not teach storing virtual address information in each physical data block to allow a reverse mapping between physical data blocks and a virtual address space, as is recited in the present set of claims. Moreover, *Carter* actually teaches away from storing virtual address information in each physical data block of a storage device. *Carter* teaches a directory that corresponds to pages of memory distributed across a network of nodes, in which only a one-way mapping from virtual address to local *memory* address and owner node is provided. The presently claimed invention, on the other hand, provides a two-way mapping that allows a virtual address to be mapped into a block address in a storage device and allows a given physical data block to be mapped into one or more virtual addresses.

**III. Conclusion**

It is respectfully urged that the subject application is patentable over *Carter* and is now in condition for allowance.

The Examiner is invited to call the undersigned at the below-listed telephone number if in the opinion of the Examiner such a telephone conference would expedite or aid the prosecution and examination of this application.

DATE: 10 March 2003

Respectfully submitted,



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